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Column 465

Avalanche forecasting has traditional roots

by Sarah Locke

Avalanche forecasting is a sophisticated affair these days, relying on everything from remote weather stations to satellite images to on-the-ground experts.

But long before the first public avalanche bulletin was ever put out, First Nations had their own ways of assessing avalanche hazards, and nothing could demonstrate their abilities more clearly than an event that occurred on the Chilkoot Pass more than a century ago.

Rescuers search for victims of the 1898 Palm Sunday avalanche on the Chilkoot Trail.

In 1898 the Klondike gold rush was in full swing, and on Easter weekend hundreds of stampeders were toiling up the pass, lugging their goods to the top through a blanket of fresh snow. While the new snow would have made the ascent more difficult, many might have welcomed the warm breeze that blew from the south.

But the two were a deadly combination: early on Easter Sunday, a wall of white thundered down the pass; other avalanches followed soon afterwards, crashing down both sides of the pass and killing at least 69 of the stampeders.

Hundreds of Tlingit packers were also working on the trail at that time, but none of them were buried. Knowing that the combination of new snow and warming weather was hazardous, they decided not to go up the pass that weekend.

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"The packers knew that the changing weather conditions meant there could be an avalanche," said Kirstie Simpson, a Yukon avalanche educator, "whereas the stampeders either did not listen to them or could not understand their warnings."

Simpson often teaches introductory avalanche courses in the White Pass area, not far from where the infamous slide occurred. She likes to begin these sessions by telling students about the Palm Sunday slide.

"It lets them know that we do have avalanches in this area, and the main message is that we have a lot to share in terms of our own local knowledge and traditional knowledge."

In 2002, Simpson presented a paper on traditional knowledge in avalanche forecasting at the biannual International Snow Science Conference. She says her interest in the topic had been piqued by a number of discoveries; one was finding an Inuit poem titled "The Father's Song" whose first three stanzas read:

> Great Snowslide,
> Stay away from my igloo,
> I have my four children and my wife;
> They can never enrich you.
>
> Strong snowslide,
> Roll past my weak home.
> There sleep my dear ones in the world.
> Snowslide let their night be calm.
>
> Sinister snowslide,
> I just built an igloo here sheltered from the wind,
> It is my fault if it is put wrong.
> Snowslide, hear me from your mountain.

Simpson was living in the Northwest Territories at the time, and asked an Inuvialuit man to translate the poem from English back into its original language. He was unable to do so as Inuvialuktun, the dialect spoken by Inuit in the western Arctic, has no words for avalanche or snowslide -- these phenomena do not occur along the barrenlands of the western Arctic.

People living in
mountainous regions such
as Baffin Island, however,
have a long history of
living in avalanche terrain.
"Many people have had a
family or community
member killed by an
avalanche; you just do not

hear about it," said Simpson.

In his 1935 book *Arctic Adventures*, author Peter Freuchen recounts the tale of an avalanche burying a family while they were inside of their igloo one winter. Everyone but the grandmother escaped. After the spring melt, the grandmother's shoulder and right arm could be seen protruding from the igloo -- the flesh eaten away by gulls.

Tahltan Tlingit learn modern avalanche forecasting tecnniques at a course in Cassiar.

(photo: Kirstie Simpson)

Soon after a young girl, Ivaloo, was born into the family, and a large birthmark covered her right arm and shoulder -- in the same place as the scars on her grandmother. "Consequently it was quite evident that Ivaloo was the old woman reborn," wrote Freuchen.

One evening in Yellowknife, Simpson by chance had dinner with a family from a mountainous area of the eastern Arctic, and asked them what they knew about avalanches in their community. The young mother told one story about a ptarmigan hunter who had fallen through a cornice a few years earlier and died.

Then she proceeded to tell about a grandmother dying after a family was buried in an avalanche, and how a granddaughter with an unusual scar was born soon after.

"My mouth just fell open; I could not believe that I was hearing this traditional story told in a contemporary way," said Simpson. "It seemed to me, and obviously to her by the way the story was told, that the story was as contemporary as the one about the ptarmigan hunter."

Simpson said it was a sharp reminder of the way that traditional knowledge often is passed on in the form of stories, rather than lectures on a particular topic.

"You have to pay attention to the story."

A Yupik story from Alaska is one of her all-time favourite avalanche stories. It was

from the days when the trickster Raven "used to eat people because they were so easy to trick." One day Raven flew over a coastal village screaming "Your enemies are coming," and then advised the men to surprise their enemies by hiding in a snowcave at the base of a steep cliff.

Once it was dark, Raven broke off the large cornice at the top of the cliff by jumping up and down on it. The resulting avalanche killed all of the men. Raven, being lazy, waited until the spring thaw had exposed their bodies. "Then he returned to eat them all."

Simpson advises people travelling in the backcountry today to take advantage of the myriad of sources available on avalanche information. The Canadian Avalanche Association has a website at www.avalanche.ca or contact Kirstie Simpson at simpsonk@polarcom.com or (867) 633-2199.